CLAIMS

We claim:

1.) An ear coupler comprising:
an annular side wall;
a bottom wall, integral with said annular side wall;
an internal chamber, formed by said bottom wall and said annular side wall;
a port in said annular side wall; and
a flexible flange extending from said annular side wall.

2.) The ear coupler of claim 1, wherein said annular side wall and said bottom wall are transparent.

3.) The ear coupler according to claim 1 or 2, additionally comprising ribs in said annular side wall.

4.) The ear coupler according to claim 1 or 2, wherein said bottom wall contains surface features.

5.) The ear coupler according to claim 1 or 2, wherein said bottom wall contains a target to aid in placing the coupler over the subject's ear.

6.) The ear coupler according to claim 1 or 2, wherein said flexible flange is coated with adhesive, and wherein said flexible flange includes a barrier for containment of said adhesive.

7.) The ear coupler according to claim 6, wherein said flexible flange additionally includes a second set of surface features to aid in coating said flexible flange with said adhesive.

8.) The ear coupler according to claim 1 or 2, additionally comprising an acoustic transducer assembly adapted to removably fit in said port.

9.) The ear coupler according to claim 8, wherein there is an interference fit between said acoustic transducer assembly and said port.

10.) The ear coupler according to claim 9, wherein when said acoustic transducer assembly is fitted in said port, the acoustic transducer assembly mates with the ribs in said annular side wall.

11.) The ear coupler according to claim 10, wherein said acoustic transducer assembly can mate in either an up or down position with said ribs in said annular side wall.

12.) The ear coupler according to claim 11, wherein said acoustic transducer can be switched between mating positions during use.

13.) The ear coupler according to claim 1 or 2, additionally comprising a tab integral with said flexible flange.

14.) An ear coupler comprising:
an annular side wall;
a bottom wall, integral with said annular side wall;
an internal chamber, formed by said bottom wall and said annular side wall;
a port in said annular side wall; and
a flexible flange extending from said annular side wall, said flange being coated with adhesive, and having a barrier for containment of said adhesive.

15.) An ear coupler comprising:
an annular side wall;
a bottom wall, integral with said annular side wall, said bottom wall containing surface features;
an internal chamber, formed by said bottom wall and said annular side wall;
a port in said annular side wall; and
a means for removably attaching the ear coupler to a subject's head.

16.) The ear coupler according to claim 15, wherein said surface features form a grid pattern.

17.) An ear coupler comprising a one-piece body, said body having:
an internal chamber,
a port in communication with said chamber, and
a means for removably attaching the ear coupler to a subject's head.

18.) The ear coupler according to claim 17, wherein said ear coupler is made by injection molding.

19.) The ear coupler according to claim 17, wherein said ear coupler is made by thermoforming.

20.) The ear coupler according to claim 18 or 19, wherein the means for attaching the ear coupler to a subject's head is a flexible flange, coated with adhesive, disposed around said chamber.

21.) The ear coupler according to claim 20, wherein said body is transparent.

22.) The ear coupler according to claim 20, additionally comprising a tab integral with said flexible flange.

23.) The ear coupler according to claim 21, additionally comprising a target to aid in placing the coupler over the subject's ear.

24.) An ear coupler comprising:
an annular side wall;
a bottom wall, integral with said annular side wall;
an internal chamber, formed by said bottom wall and said annular side wall;
a port in said annular side wall for receiving an acoustic transducer assembly, said port sized so as to create an interference fit with said acoustic transducer assembly; and
a means for removably attaching the ear coupler to a subject's head.

25.) An ear coupler comprising:
an annular side wall;
a bottom wall, connected with said annular side wall;
an internal chamber, formed by said bottom wall and said annular side wall;
a port in said annular side wall; and
a flexible flange connected with said annular side wall, said flexible flange being coated with an adhesive for attaching the ear coupler to a subject's head.

26.) An ear coupler comprising:
an annular side wall;
a bottom wall, integral with said annular side wall;
an internal chamber, formed by said bottom wall and said annular side wall;
a port in said annular side wall; and
an acoustic transducer assembly adapted to mate with said annular side wall in an either up or down position.

27.) A method for assembling an ear coupler, comprising the steps of:
providing a one-piece transparent body, said body having an annular side wall, a bottom wall, and a flexible flange;
defining a port for entry of an acoustic transducer assembly in said annular side wall; and
dispensing an adhesive on said flexible flange.

28.) The method according to claim 27, additionally comprising providing for surface features in said bottom wall.

29.) The method of claim 28, additionally comprising providing for ribs in said annular side wall.